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ABSTRACT

A comprehensive analysis was conducted of the curriculum development process in the trade program areas of Connecticut Regional Vocational-Technical Schools (CRVTS). Methods included review of the current curriculum development processes through review of materials and observation; identification, collection, and analysis of alternative processes used in other states; review of curriculum materials developed by several national vocational education consortia; and dissemination of findings, conclusions, and recommendations. The project was primarily a process analysis. A central part was intensive involvement of an advisory committee. A comprehensive survey of all trade instructors in the CRVTS was conducted to determine their assessment of the state curriculum guide in their trade area. Findings are presented in two parts. The first part discusses general findings; the second addresses specific findings and results as related to project objectives. Recommendations are grouped into three broad categories: those addressing organizational and procedural problems in the development of curricula for the vocational-technical schools, those focusing with an impact on the timely delivery of new or revised curriculum guides, and those addressing qualitative issues related to the structure and organization of the current curriculum guides and student performance-based recordkeeping system. Appendixes include survey instruments and results and meeting summaries. (YLB)

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CURRICULUM DEVELOPMENT PROCESSES IN THE REGIONAL VOCATIONAL TECHNICAL SCHOOL SYSTEM

FINAL REPORT

ED263387

PREPARED BY

EASTCONN REGIONAL EDUCATIONAL SERVICE CENTER
NORTH WINDHAM, CONNECTICUT

PREPARED FOR

CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION
BUREAU OF VOCATIONAL SERVICES
HARTFORD, CONNECTICUT

PROJECT DIRECTOR
DR. DONALD THOMPSON

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Ms. Barbara Biscardi, Department Head, Hairdressing and Cosmetology, and Mr. George Paradis, Electrical Department Head, H. C. Wilcox Regional Vocational-Technical School; Ms. Marsha McDonough, Director, Vinal Regional Vocational-Technical School; Mr. Gabriel Malafronte, Plumbing and Heating Department Head, Platt Regional Vocational-Technical School; Mr. Leo Lattizori, Machine Drafting Department Head, E.C. Goodwin Regional Vocational-Technical School; Mr. Paul Higginson, Carpentry Department Head, W.K. Kaynor Regional Vocational-Technical School; and Mr. Joseph Pernaselli, Assistant Director, Windham Regional Vocational-Technical School.

INTRODUCTION

Statement of the Problem

Curriculum provides the base for any quality educational program. The curriculum provides the framework around which the educational experiences of the student are built. Perhaps more than any other school-based educational program, vocational education depends on relevance. It is the curriculum which brings this relevance to the educational experiences of each student and ensures that the student can enter and succeed in the world of work. Any curriculum that is not developed in a systematic manner, or that becomes irrelevant by being static will soon begin to have a negative effect on the prospects for student success. Curriculum development should be an on-going process that includes the initial design of a curriculum, the implementation of the curriculum, evaluation and assessment, and revision and updating based on the evaluation and assessment. This is particularly true in the 1980's when rapid advances in technology have brought about dramatic changes in the labor market, increasing the diversity of jobs as well as changing the duties and skills required in many existing occupations. To remain relevant in today's world, vocational education must be dynamic and changing. Vocational educators must maintain a constant vigil to insure that instructional programs are addressing the needs of both the labor market and student.

As a national leader in vocational education, Connecticut and its system of regional vocational-technical schools has set the standard in terms of a number of vocational education practices. Vocational-technical education programs in Connecticut RVTS's were among the first to be competency-based. The requirement that trade instructors be skilled craftspersons has insured relevance for vocational-technical education programs. The curriculum development process as outlined by State Department of Education guidelines has been in place for many years. That process relies on trade instructors and craft committees for much of the

input on the development and revision of curriculum. The process has many procedural steps and requires each new or revised curriculum guide to be reviewed by numerous committees and individuals.

During the last few years there has been a growing concern about the amount of time required to process new or revised curricula and get it into the hands of instructors. Also, both instructors and administrative staff have questioned whether the various curricula were being implemented as intended and if instructors were using the competency-based performance based record system in the manner intended. It was these concerns which brought about this project. In essence, it is these questions which this project attempted to answer.

Rationale

On-going assessment and evaluation are integral components of the curriculum development process. The worth of a curriculum is directly related to the planning that goes into creating the curriculum, but it is equally true that the continued value of that curriculum is dependent on the attention to problem areas, updating and revising the curriculum as needed.

The rationale of this project can stated in the form of the three basic assumptions which underlie this effort to analyze the curriculum development process in trade areas of Connecticut's Regional Vocational-Technical Schools. These assumptions are:

1. Regardless of how good the current process may be, a comprehensive analysis which includes the involvement of instructors, curriculum planners and policy makers and the careful study of a variety of alternative processes can only serve to strengthen and improve the curriculum development effort.
2. By virtue of the job marketplace wherein its graduates must function, vocational/technical education and its attendent curricula must be responsive to

change and must insure relevance. The development process used to achieve the final classroom/shop curriculum must be timely, responsive and relevant.

3. Vocational/technical curricula must be data-based in the sense that the development process utilizes accurate and timely data regarding the world of work, community attitudes, school policies and practices, graduate follow-up information, etc.

Goals and Objectives

The goal of this project was to conduct a comprehensive analysis of the curriculum development process in the trade program areas of Connecticut Regional Vocational-Technical Schools and to involve curriculum planners and policy makers in the analysis process so that the analysis effort would serve as an organizational development tool for the refinement of the curriculum development methods and processes.

Specific operational objectives for this project were:

1. To conduct a comprehensive analysis of the current curriculum development process (the official process outlined in publications and directives as well as the actual process as practiced in the various institutions/trade areas) to determine the degree to which the process is timely, cost effective and produces curriculum guides of high quality.

2. To collect information regarding curriculum development processes used in other states in secondary vocational schools, as well as curriculum development models which have been developed by consortia, regional educational laboratories and the National Center for Vocational Technical Education. Examples of the curricula development process models proposed by these latter organizations include V-TEC's and the DACUM.

3. To compare the Connecticut curriculum development process with other models to determine where gaps might exist and/or changes could be made to insure the most effective processes can be implemented in future curriculum development efforts. To accomplish this, a series of recommendations focusing on alternative processes will be developed.

4. To determine the degree to which the current student performance based record keeping system is used in the various trade/shop areas and to identify the strengths and weaknesses of this system, and to propose revisions/alternatives which would improve the degree of use, improve the cost effectiveness, and decrease the time required for instructors to complete the student evaluations.

PROJECT DESIGN

Target Population

The target population for this project in terms of involvement in the process as well as the population to be impacted by the results, includes SDE Division of Vocational Technical Schools Consultants, and potentially all administrative and instructional staff in the RVTS's. The organizational development nature of the project required that these persons be involved in the project effort, and that they accept the goals and objectives which were being addressed. As with any organizational development effort, the underlying assumption of this project is that there is a great creative potential for change and improvement within most organizations. This creative potential exists within the vocational-technical school system and this project was designed to provide a forum for that talent to analyze

the current curriculum development process and to propose and try out alternatives which may enhance and expedite that process. As noted later in the Meetings section, this project had a very active and committed advisory committee which contributed greatly to the overall project success.

Procedure and Activities

As noted earlier in this report, the primary objective of this project was to conduct an analysis of the current curriculum development process in regional vocational-technical schools in Connecticut. This project was conceptualized as an organizational analysis and development effort. Specifically, the design called for: 1) a review and analysis of the current curriculum development process through observation, interviews, surveys, document analysis, and case study analyses; 2) the involvement of a significant number of SDE and RVTS staff in this analysis process (the advisory committee); 3) the identification of curriculum development processes used by other states and/or proposed by professional associations and regional education laboratories and the purchase of these materials; 4) the review and analysis of the materials collected from other sources, including a review and analysis of the V-TECS and DACUM materials for possible usefulness; 5) the development of alternate strategies based on the review and analysis of both the current process and the processes used in other states by the project director and advisory committee.

Specifically, the methods used included: review of materials and observation of processes by the Project Director; interviews with current and former trade and curriculum consultants regarding the processes being studied; the extensive use of a select group of vocational educators from the vocational-technical schools as an advisory committee to review materials, processes and procedures currently used in curriculum development; a survey of all trade instructors in each of the vocational-technical schools; the identification, collection and analysis of alternative

curriculum development processes used in other states including V-TECS and DACUM; a review of curriculum materials developed by several national vocational education consortia (MAVCC, V-TECS, and CIMC) and the Center for Vocational Education; and dissemination of the findings, conclusions and recommendations resulting from the project to central office staff (particularly trade consultants), vocational-technical school Directors and Assistant Directors and trade Department Heads during the fall of 1985.

Project Staff Functions

The paid project staff for this program consisted solely of the project director. However, the members of the project advisory committee and Drs. Fred Haddad and Valerie Pichanick were major contributors to the process and the ultimate success of the project.

The project director was responsible for all aspects of the project including budget control, logistical planning for advisory committee activities, the review of documents and materials, the design of the instructor's survey, the identification and collection of curriculum materials from other sources, data analysis and the preparation of this report. In all of these activities, the persons noted above provided invaluable guidance and assistance.

Techniques and Methods

This project was primarily a process analysis which focused on the manner in which curriculum materials (specifically curriculum guides) are produced, revised and used in the Connecticut Regional Vocational-Technical Schools. Several sources of data were used in the analysis. Data were collected from all trade instructors in Connecticut Regional Vocational-Technical Schools through a survey which was designed by the project director in consultation with the advisory committee. The

survey questionnaire was one page long and asked for the respondent's observations/attitudes regarding the availability, use and value of the curriculum guide in their trade area as well as the strengths and weaknesses of the guide and student performance based record keeping system. A copy of the survey is provided in the Appendices and the responses are presented in the Results section. Survey forms were distributed, collected and returned to the project director by the Assistant Director of each school. Of the 553 trade instructors, completed questionnaires were returned by 260 respondents.

In addition to the survey of all trade instructors, the advisory committee was used as an "expert panel" and asked to respond to several questionnaires designed to elicit more specific information regarding the curriculum development process, use of curriculum guides and the student performance based record-keeping system.

Timelines

Activity	Beginning Date	Ending Date
Project Begins	September 1, 1984	September 1, 1984
Selection of Advisory Committee	September 1, 1984	November 15, 1984
Collection of Information on Curriculum Development Process in Conn. RVTS's	September 1, 1984	November 15, 1984
Identification and Collection Curriculum Development Materials From Other Sources (states,regional labs,etc.)	September 1, 1984	November 30,1984
Review of Curriculum Development Materials by Project Director and Advisory Committee	November 30, 1984	December 15, 1984
Advisory Committee Names Submitted to SDE	November 30, 1984	November 30, 1984

1st Advisory Committee Meeting for Orientation and Project Overview	December 17, 1984	December 17, 1984
Project Director and Advisory Committee- Review, Analysis and Synthesis of Materials, Developing Alternatives for the Curriculum Development Processes	December 18, 1984	March 30, 1985
2nd Advisory Committee To Review, Analyze and Synthesize Materials and Presentation by Team From V-TECS Regarding Model	February 26, 1985	February 26, 1985
Project director interviews with current and former curriculum consultants	February 28, 1985	March 30, 1985
3rd Advisory Committee Meeting To Review Materials and Hear a Presentation on DACUM by Consultant	April 9, 1985	April 9, 1985
4rd Advisory Committee Meeting to Determine Specific Alternatives and Recommendations Regarding the Current Process	May 28, 1985	May 28, 1985
First Draft of Recommendations Developed By Project Director and Sent to Advisory Committee for Review	May 28, 1985	June 7, 1985
5th Advisory Committee Meeting to Review and Finalize Recommendations to Improve Curriculum Development Process	June 14, 1985	June 14, 1985
Submission of V-TECS, DACUM and other curriculum materials to SDE	June 14, 1985	June 14, 1985
Preparation of Analysis Report on the Curriculum Development Process	June 15, 1985	July 15, 1985

Preparation of the Final Administrative and Fiscal Reports	**June 15, 1985**	July 15, 1985
Project Ends	**June 30, 1985**	June 30, 1985
Submission of the Final Fiscal and Administrative Reports to SDE	**July 31, 1985**	July 31, 1985
Submission of the Final Report on the Analysis of the curriculum Development Process	**July 31, 1985**	July 31, 1985

Workshops and Meetings

A central part of this project was the intensive involvement of a highly select project advisory committee comprised of vocational-technical school instructors and administrators and trade consultants from the central office. The committee met on five occasions over the course of six months. Meetings typically ran five to six hours. (Note: The earlier Timelines section provided the meeting dates of the advisory committee. The project advisory committee name/affiliation list, agendas and meeting summaries are provided in the appendices).

The project advisory committee meetings provided much of the data for analysis in this project. The committee was used as a group of experts to provide, analyze, interpret and synthesize data. The committee provided data through their interaction, responses to questionnaires, evaluating curricula materials from outside sources, and their comments, observations and perspective regarding the vocational-technical school system. Their involvement was not limited to meetings, as all members were asked to review materials, respond to questionnaires and interpret findings outside of meetings over the course of the project.

Surveys

One comprehensive survey was conducted as a part of the data collection for this project. As noted earlier, a survey questionnaire (see appendices) with 10 questions was developed by the project director and DVTAE consultant. This questionnaire was then refined through review and critique by the advisory committee. The questionnaires were distributed, collected and returned to the project director by the Assistant Directors of each RVTS. The survey contained seven items which required a Yes/No or multiple choice response and three questions which required a write-in response. Objective items were analyzed by computing frequency/percent of response. Write-in responses were subjected to a thematic analysis by identifying common themes and grouping responses. These findings are presented in a later section.

As noted earlier, the advisory committee was also used as a survey data source. Three separate questionnaires were distributed to committee members by mail. They were asked to respond to the questionnaires and bring their questionnaires/responses to the next scheduled meeting. Their responses were used to develop an expert consensus regarding various issues being studied. No statistical analyses were done on these responses. These three questionnaires are included in the appendices.

Reports/Dissemination

The only report to be generated by this project is this final report. Dissemination will take two forms. First, this report will get wide distribution to DVTAE staff personnel, PVTS administrators, department heads and curriculum steering committee chairpersons. In addition, during the fall of 1985, the findings will be presented to meetings of Directors and Assistant Directors from the RVTS's.

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SUMMARY

Findings, Results and Analyses

This section of the report is presented in two parts. The first part presents the general findings which were generated as a result of the data collection activities, including surveys, interviews and document reviews. The second section will provide a review of findings specifically related to the project objectives as set forth in the original evaluation proposal.

Section A:

As noted earlier, data collection consisted of surveys, interviews and document analysis. The most broad based data collection was through a survey of trade instructors in all of the RVTS's. This survey was described earlier, and the survey form and the responses (both number of responses and percents) are presented in Table 1 in the appendices.

In essence, the survey sought to determine the availability, use and perceived quality of the curriculum guides for the various trade areas. Ninety-five percent of the responding instructors indicated that they had a copy of the guide for their trade area (it is unexplained as to why 5% did not), and 79% reported using the guide on a weekly basis for planning instruction. An even greater number, 94%, indicated that they used the instructional objectives from the guide to shape the learning activities in their shop. To another question, 69% indicated that they used the guide as a general guideline for planning their instruction (rather than using it on a daily, class by class basis).

A curious result was noted for responses to two questions regarding the performance based student record keeping system which is a part of the curriculum guide. Only 73% (190) reported that they use the record keeping system, while 79% (206) reported that their records were up to date with appropriate notations.

There were three questions on the survey which required a write-in response. To analyze responses to these questions, answers were grouped by trade area and by the major themes the responses addressed. There tended to be a great deal of commonality in the answers and this made the theme grouping possible.

For questions 8, "What is the major strength of the curriculum guide for your trade area?", 238 responses were given and these were grouped into five theme areas. Thirty-five respondents (14%) indicated that the student record keeping system was the major strength. One hundred and ten, (47%) indicated that the guide aids in developing lesson plans. Sixty- nine (28%) said the guide served as a general guide for instruction, while thirteen (6%) said the guide served as a reference for curriculum planning. The final category of responses, with 12 (5%) indicated that the major strength of the guide is that it is "current". The grouping by trade area of these responses did not produce any differences in responses with respect to variations between trade areas.

Question 9 asked, "What is the major weakness of the curriculum guide for your trade area?". One hundred and seventy-eight instructors provided a write-in reply to this question and these responses were grouped into four theme areas. Eight-five (48%) said that the guide was outdated. Responses from instructors in electronics, electrical, auto, machine tool, and plumbing and heating were predominant in this category. Forty-five instructors (25%) indicated the guide contained too much material to cover in the time available. Responses from instructors in electronics, machine tool, machine drafting and culinary arts made up the majority of this number. Thirty-five (20%) of the respondents indicated the guide required too much equipment which was not available. Plumbing and heating, machine tool, graphics and electronics instructors made up the bulk of the respondents in this category. Responses categorized into the final theme area with 13 respondents (7%) indicated that parts of

the guide were irrelevant. Instructors from machine drafting, hairdressing and cosmetology, machine tool, and electronics provided the majority of these responses.

The final question asked, "Do you have any suggestions that would improve the curriculum development process or the curriculum guides?". One hundred and eighteen instructors responded to this questions. As might be expected, the responses closely paralleled the shortcomings previously identified in questions 9. Eighty-five (72%) said, "update the guide". Other suggestions included, "provide for more input by instructors," "develop different guides for different ability level students and different areas of the state", "make the guides more explicit", "provide more shop time," and "insure guides reflect local industry". A more comprehensive listing of these comments is provided in the appendices of this report in the summary for the second advisory committee meeting

It should be noted that the complete unedited responses to questions 8, 9 and 10 are provided in a separate addendum to this report. These unedited responses provide more specific information for planning purposes.

As was noted earlier in the Methods and Survey sections, the advisory committee was used as an "expert panel" to respond to, and reach consensus on a number of questions and issues. The following list of questions was drafted by the project director in consultation with the CSDE project officer. The advisory committee was asked to respond to, and reach consensus on each of the questions. The questions and committee consensus are presented below.

1. Is the guide organized in an effective manner such that it makes it easy to use?
   Yes. However, attendance, grades and the curriculum should be contained in one document. The current competency based record keeping system is a problem however and many instructors do not use or maintain it as intended. It is too time consuming.

2. Does the curriculum guide provide clear and complete instructions for implementing the curriculum?
   No instructions are provided in the guides as to how to implement the curriculum. The guides were not intended to be a complete curriculum in

this respect. The consensus of the group is that the guides should not necessarily be "complete" in the sense of containing everything one needs to know to implement the curriculum. However, Department Heads and Assistant Directors should be responsible for assisting new instructors to implement the curriculum. This should also be covered in the orientation provided for new instructors. New teachers should have a complete job description, and a set of instructions on how to handle the classroom, curriculum and academic procedures.

3. Can the total curriculum as outlined in the guide be implemented within the practical time, personnel and resource constraints of your shop?
   The committee was split in its opinion regarding this question. There was variability based on both trade area and school. It is possible to expose students to all of the objectives for most trade areas, however it is not possible to insure that all students have achieved all competencies. Partly, this results from an increase in class size in most shops (from 12 to the now mandated 20) and the dramatic decline in the dropout rate which means larger class size at the higher grade levels.

4. Is the guide appropriate to the target population of students?
   Yes. In most respect, the guide does provide meaningful objectives relative to the needs of an entry level tradesperson.

5. Should the guide be more explicit regarding methods, materials and teaching strategies, or should it be less explicit, or is it about right?
   Most guides as they are currently written are appropriate for the experienced instructor. However, the degree of explicitness is not adequate or the new instructor who has no knowledge of how to implement the curriculum. The guides do not provide this type of instruction. Because of variations within trade areas in different parts of the state, most committee members expressed concern over making the guides too explicit and taking away the individual instructors ability to make creative adjustments to the curriculum. Besides, the textbooks used in each trade area provide a fairly explicit guide for instruction in each shop.

6. Does the activities section of the guide include activities which are logically related to insuring that students achieve the objectives outlined earlier in the guide?
   The current curriculum guides do not generally specify activities designed to accomplish each objective. Two exceptions were noted, HSO and Electronics. Committee members noted the guides were not intended to indicate activities.

7. Are the curriculum components (activities, objectives and student evaluation) all logically related?
   The general agreement of the committee indicates that the answer to this question is YES with respect to the objectives and student evaluation. As noted in 6 above, activities are not generally included in the guides.

8. Is the content outlined in the curriculum guide adequate to meet the objectives?

In terms of the curriculum objectives for each area, the answer to this question is YES. Curriculum guides are generally very comprehensive in terms of the objectives stated. However, guides generally list only objectives as noted in the answer to question 7.

9. Does the guide provide objectives and activities which are up-to-date and suitable for instruction in your trade area?
   This is definitely a problem area for many of the guides which are out-of-date and in need of updating.

10. To what extent are the objectives and activities complete with regard to what students need to know to become competent entry level tradespersons?
    The guides generally provide adequate material/objectives to prepare graduates to enter the trade at the pre-apprentice level.

11. Does the curriculum guide outline learning strategies/activities which are relevant to both the students and the material to be learned?
    As such, the guides do not provide learning strategies or activities. However, the objectives which are provided are in fact relevant to both students and the material to be learned.

12. Does the curriculum guide outline a hierarchy of learning activities which is appropriate for each grade level, and that leads logically to the next grade level?
    This was perceived to be a problem area in several trades. Objectives do not always seem to follow a logical hierarchy up through the grade levels. Many instructors find it necessary to adjust the level for which some objectives are taught. Another problem here is the lack of articulation between some academic areas and the needs of the trade areas (i.e. insuring that certain math concepts are taught in the academic classrooms so that particular trade areas may move ahead in teaching fundamental concepts related to the trade area).

13. Can teachers with different training/backgrounds implement the curriculum equally well?
    YES, but also see response to question 14.

14. Can a teacher without special training in the content implement the curriculum?
    NO. The nature of the trade programs in Connecticut VT Schools is such that only competent and highly skilled tradespeople can do the job.

15. Does the guide provide sufficient learning activities for the complete course of study?
    For the most part guides do not provide specific learning activities as noted earlier in several sections. Activities are primarily contained in shop textbooks.

16. Is the current performance based student record keeping system which is incorporated in the guide:
    a. an accurate reflection of the skills students need to perform on the job?
       In general YES. However, many instructors do not use this system for a variety of reasons.

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b. too time consuming/about right/not extensive enough?
The process as it currently exists is in fact too time consuming given the other demands placed on the trade instructors. This is a major reason why is it not used by many instructors.

c. are the individual student objectives truly "objective" and measureable such that you can make an accurate performance appraisal of the student?
YES. A skilled tradesperson can determine the degree to which each student has achieved most objectives.

d. how could student evaluation be improved? Please explain.
The current system is too time consuming and is generally cumbersome. Alternatives to the current system need to be explored. Possible changes might include having students do part of the record keeping with instructors checking these on a regular basis (this is currently done in some shops). Another possibility might be to simplify the system by removing some of the required marking (i.e. when objective is taught, practiced etc.).

17. What types of training, support, and resource personnel are necessary to implement the curriculum? Please Explain.
Additional training for new instructors is badly needed. Special education support in terms of remedial math and reading is especially important in terms of supporting the on-going instruction efforts in both the shops and the academic classrooms. This support is an absolute requirement to insure that the special needs students can keep pace with the trade instruction.

Another "survey" of the advisory committee consisted of a 17 item questionnaire titled Self Rating Evaluation (not a summative scale). This questionnaire assesses the degree to which vocational technical school programs are competency based. The survey form and the actual responses are presented in the appendices in Table 2. The number of committee members responding was 12.

The results indicate that generally the committee members perceived the trade programs to be competency based. The weakest areas of competency basing include: a lack of variety of learning materials and resources; and the compatibility of facilities for providing such instruction. Items 3, 4, 8, and 13 had the lowest ratings. The strongest areas of competency basing include: students learning from each other; students working independently; valid performance objectives; and individualized instruction (items 5, 7, 10, 16).

The final "survey" of advisory group opinion was titled Curriculum Guide Rating Form (see appendices). This five question survey asks the respondent to rate five

specific components of the curriculum guides for their trade area. Committee members ratings were not collected and summarized but rather their responses were used as a basis for discussion and consensus during a committee meeting. The five areas include: objectives, methodology, organization of materials, student evaluation, and overall assessment. The committee consensus regarding these areas is presented below.

With respect to the objectives contained in the curriculum guides, committee members rated the objectives (question 1) as average. There is some inconsistency between objectives and the objectives are only partially operational for the instructor. As for methodology (question 2) the committee agreed that this is not an area addressed by the guides. Most guides provide no methodology for implementing the curriculum.

Question 3 asks for a rating of the organization of materials in the guides. Again, the consensus was that this area should be rated as average. Instructors must provide most of the organizational sequence for instruction. Opinion was split regarding student evaluation (question 4). Several committee members felt that the current student evaluation process was somewhat haphazard and unreliable, while others rated the student evaluation process as average.

For the overall evaluation of the guides (question 5) the committee consensus rating was that they are "average", with both strengths and weaknesses. They require considerable supplementary effort by teachers to make a complete curriculum.

Section B:

This section of the report will address the specific findings and results as related to the objectives outlined earlier. The findings will be presented in conjunction with each objective in the order in which the objectives were presented.

As noted in the methods section, there were a number of data sources used in this project. Advisory Committee input, surveys, interviews and document analysis were all major sources of data. Throughout this section, reference will be made to

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specific data sources, as appropriate, in outlining the results. In several instances, there are apparent discrepancies between data sources. In these cases, I have attempted to resolve these discrepancies and base my conclusions on the data which I believe to be the most accurate.

Objective 1 - To conduct a comprehensive analysis of the current curriculum development process (the official process outlined in publications and directives as well as the actual process as practiced in the various institutions/trade areas) to determine the degree to which the process is timely, cost effective and produces curriculum guides of high quality.

The process followed in revising existing curriculum guides is outlined in a four page document dated March 1980. Based on interviews, the instructors survey and advisory committee reactions, it is clear that the process is overly time consuming, some of the steps in the process are unnecessary or counterproductive and specific guidelines for curriculum steering committees regarding structure and content are lacking.

Generally, the revision process for existing curriculum guides may take anywhere from eighteen months to three years to complete from the time the curriculum steering committee for a particular trade area starts the revision to the time the revised guide is distributed to instructors. This appears to result from: 1) Burdensome review requirements, specifically by the Program Study Committee and RVTS Directors, and 2) By the fact that the State Department has relied on RVTS's trade print shops to do the final printing and binding of guides.

Since the current process is both expensive and time consuming and there are limited funds, only a portion of the curriculum guides are revised each year. Some guides have not been revised for four or five years. The fact that many guides are not up to date is attested to by responses on the instructors survey. Responses to

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specific components of the curriculum guides for their trade area. Committee members ratings were not collected and summarized but rather their responses were used as a basis for discussion and consensus during a committee meeting. The five areas include: objectives, methodology, organization of materials, student evaluation, and overall assessment. The committee consensus regarding these areas is presented below.

With respect to the objectives contained in the curriculum guides, committee members rated the objectives (question 1) as average. There is some inconsistency between objectives and the objectives are only partially operational for the instructor. As for methodology (question 2) the committee agreed that this is not an area addressed by the guides. Most guides provide no methodology for implementing the curriculum.

Question 3 asks for a rating of the organization of materials in the guides. Again, the consensus was that this area should be rated as average. Instructors must provide most of the organizational sequence for instruction. Opinion was split regarding student evaluation (question 4). Several committee members felt that the current student evaluation process was somewhat haphazard and unreliable, while others rated the student evaluation process as average.

For the overall evaluation of the guides (question 5) the committee consensus rating was that they are "average", with both strengths and weaknesses. They require considerable supplementary effort by teachers to make a complete curriculum.

Section B:

This section of the report will address the specific findings and results as related to the objectives outlined earlier. The findings will be presented in conjunction with each objective in the order in which the objectives were presented.

As noted in the methods section, there were a number of data sources used in this project. Advisory Committee input, surveys, interviews and document analysis were all major sources of data. Throughout this section, reference will be made to

question 9 regarding weaknesses show 48 percent of the respondents indicated the guides were out of date. Also, a strong consensus by the advisory committee.

Another problem is the lack of guidelines for curriculum steering committees regarding structure and content for the curriculum guides. Apparently, most committees use the old guide as the model and add or delete student performance objectives as necessary. There are no requirements regarding what resource materials the committee should review or exactly what process they should use in doing the revision. While the lack of structure and content guidelines is a problem, the fact that the committee members are skilled tradespersons and there is much input from craft committees for the revision does tend to maintain a high degree relevance with respect to the competency based objectives which are built into the guides.

Objective 2 - To collect information regarding curriculum development processes used in other states in secondary vocational schools, as well as curriculum development models which have been developed by consortia, regional educational laboratories and the National Center for Vocational Technical Education. Examples of the curriculum development process models proposed by these latter organizations include V-TEC's and the DACUM.

A variety of curriculum materials from several sources were collected and reviewed by the project director and advisory committee. Curriculum materials from three national consortia (MAVCC, V-TEC, and CIMC) were reviewed by the project director and advisory committee. In addition, a consultant from the National Center for Research in Vocational-Technical Education was brought in to introduce the DACUM process model for curriculum development to the committee and project director.

Objective 3 -To compare the Connecticut curriculum development process with other models to determine where gaps might exist and/or changes could be made to insure the most effective processes can be implemented in future curriculum development

efforts. To accomplish this, a series of recommendations focusing on alternative processes will be developed.

As noted under Objective 2 above, a major part of of this project was the collection and review of curriculum materials from other sources. These materials provided the background for comparison with the process currently used in Connecticut and set the background for outlining the Recommendations which are presented later in this report.

Objective 4 -To determine the degree to which the current student performance-based record keeping system is used in the various trade/shop areas and to identify the strengths and weaknesses of this system, and to propose revisions/alternatives which would improve the degree of use, improve the cost effectiveness, and decrease the time required for instructors to complete the student evaluations.

While data reported earlier from the trade instructors survey seemed to suggest that a good percentage of instructors use the record keeping system and keep it current, data from every other source indicates that this is not true. Based on interviews with the current and two previous curriculum consultants and data from the advisory committee, it appears that the student performance based record keeping system is not being used in the way it was originally intended. While the system has many attractive features, it is both cumbersome and time consuming. The current system should be modified so that the record keeping functions would be divided between the student and the instructor. Presently, a few trade areas require students to maintain their own performance log and this is a common practice in many other states as well. As competency based vocational education programs, the offerings in Connecticut's RVTS's must maintain a performance based record regarding student achievement. This issue is in need of further study, and an examination of materials from other states/consortia would be assistance.

Unanticipated Problems

No significant problems were encountered in the conduct of this project. One minor problem did delay the initiation of the project in the fall of 1984. The advisory committee, which had a major role in the conduct of this effort, was somewhat difficult to put together in that identifying and getting agreement from prospective members, and then getting appropriate administrative clearances for released time took longer than anticipated. However, this minor delay did not have any major effect on the overall accomplishment of objectives. As noted elsewhere, all objectives were accomplished in a timely fashion.

Self Evaluation

This project went well from the beginning. With the exception of a minor delay in getting the advisory committee formed and operating (explained in Unanticipated Problems section), there were no major problems encountered. As noted in the results section, the objectives outlined in the initial proposal were accomplished. Perhaps one area in which more change could have occurred is the attitudes which were expressed by advisory committee members regarding the development process for curriculum and the content and structure of the curriculum guides. While the committee generally acknowledged the shortcomings of the process in terms of excessive delays in the process of revising curriculum guides, committee members were reluctant to consider using outside curriculum materials for reference in determining content and structure for the guides. With the exception of the recognized need for more frequent and timely updating, there was a sense of complacency about the current curriculum guides' structure and content.

As project director and as an educator and curriculum specialist, it is my opinion that curriculum developers should keep an open mind to new ideas and be ready to change current practices based on a comprehensive analysis of the work of

others. Several recommendations presented in this report are intended to insure that curriculum developers look at other materials and consider them in the process of developing or revising curriculum guides. This exposure may well shape new attitudes and a new perspective regarding both the current curriculum guides and those developed in the future.

Recommendations

The recommendations contained in this section result from data drawn from a number of sources including consensus of opinion of the project advisory committee, interviews conducted with regional vocational-technical school administrators and consultants, and from a survey of all trade instructors in the school system.

As was noted in several places in the preceding report, the principal reason for the conduct of this study was to determine ways in which the current curriculum development process might be improved to provide curriculum guides and other curriculum related materials to trade instructors in a more timely fashion, and secondly to look at the quality of the curriculum guides to determine ways in which guides might be improved to provide a better framework for the implementation of the various trade curricula. To this end, a number of recommendations have been developed. The following recommendations are grouped into three broad categories. Category 1 includes recommendations addressing organizational and procedural problems in the development of curricula for the vocational-technical schools. Category 2 presents recommendations focusing on the current curriculum development/revision process and factors impacting on the timely delivery of new or revised curriculum guides. Category 3 recommendations address qualitative issues related to the structure and organization of the current curriculum guides and student performance-based record keeping system.

CATEGORY 1: Organizational and Procedural Problems

1. Currently, curriculum development is the responsibility of a State Department consultant who has numerous operational responsibilities for a number of other areas related to vocational-technical school operation. The consultant who is currently assigned responsibility for this area has made a valiant effort to maintain quality and to remain on top of the development or revision of curricula. However, his other responsibilities make it impossible to devote sufficient energies to the ongoing curriculum needs. In view of the complexity and enormity of the task of curriculum development and revision, it is clear that this effort requires the attention of a staff person on a full-time basis. It is therefore recommended that the Division of Vocational, Technical and Adult Education create a position of curriculum consultant, whose functions would be limited to the development and revision of curricula and the coordination of all curriculum matters between the regional vocational-technical schools and the State Department of Education. This consultant should be responsible for the collection and dissemination of various curriculum materials from other states and regional consortia, and for the supervision and coordination of curriculum development and revision efforts within the regional vocational-technical schools. In addition, this person would be responsible for the dissemination and updating of all curriculum materials to be used in various trade and academic programs throughout the vocational technical school system.

2. A major problem related to the process of curriculum development and revision is the lack of specific procedures and direction for curriculum steering committees. A full time curriculum coordinator will solve part of this problem, however there is also a need for more direction from trade consultants in the curriculum development process. One of the limitations of the current trade consultant

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structure is the fact that consultants are responsible for a number of trade areas. For the most part this means that the trade consultant will not be expert in more than one or two of the trade areas for which he/she is responsible. There was an expressed need for additional trade consultants to reduce the number of trade areas assigned to each consultant. Since the hiring of additional trade consultants may not be possible at this time given the current fiscal climate, the emphasis should be on increased in-service training for trade consultants in the curriculum development process. This in-service effort should be directed by the curriculum consultant. Trade consultants should be expected to demonstrate a high degree of curriculum development knowledge in terms of both content and structure needed for the curriculum guides.

3. In addition to the in-service training for trade consultants, another possibility for improving the curriculum development process would be the appointment of curriculum planners drawn from the ranks of trade school instructors. Perhaps these curriculum planners could be the current chairpersons of the curriculum steering committees for the respective trade areas. These persons could be given released time as necessary to serve in a curriculum consultation/coordinating role as needed.

4. It was noted in an earlier recommendation that there is a need for a full-time curriculum coordinator at the state department level to insure the ongoing development and coordination of curricula. However, in each school there must also be someone who has responsibility for coordination of curriculum matters in that school. This job has fallen to the Assistant Directors of the various regional vocational-technical schools. Many assistant directors devote considerable time to curriculum issues and provide direction to their instructors in the implementation

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of curricula. However, increased coordination efforts will be required on the part of the assistant directors. Implementing the various recommendations proposed in this report will require not only a concerted effort from the State Department of Education level but also significant cooperative effort on the part of a key individual in each school. The Assistant Directors role in this process must be clearly defined by the State Department of Education and Directors of the respective regional vocational-technical schools.

5. A problem faced by curriculum planners and curriculum steering committees in revising old curricula or developing new curricula for the vocational schools in Connecticut is the lack of adequate resources within the state to support extensive research efforts into what other states and various consortia are doing regarding vocational technical curricula. Connecticut unlike many states both nationally and in the Northeast lacks a centralized vocational-technical education curriculum resource center. While the development of a comprehensive resource center is perhaps beyond present financial means of the system, it is nevertheless necessary for the initiation of some effort to collect, maintain and disseminate various needed curriculum materials. It seems logical that the person to be responsible for initiating and maintaining this effort would be the full-time curriculum consultant noted in an earlier recommendation. The curriculum materials which were purchased with project funds for this evaluation effort will provide a good beginning for a vocational-technical curriculum resource center.

6. To facilitate access to the latest curriculum materials developed in other states and to benefit from the experience and expertise available nationally in vocational education, the Division of Vocational, Technical and Adult Education should review the holdings of national vocational technical education consortia and other states

and consider the purchase of selected curriculum resources. Regional vocational education curricula consortia such as VTECS and MAVCC, as well as a number of states that have developed competency based vocational education programs, have curriculum materials which would provide a wealth of design and content expertise which could be used by curriculum steering committees in the planning and revision of curricula. This material could also be available on loan for the development of vocational-technical programs in comprehensive high schools and two-year colleges. It is the opinion of the project director (this opinion is not shared by the advisory committee) that there could be some benefit to Connecticut from membership in a regional consortium. While the degree of benefit to vocational-technical schools may be limited, there a large population secondary and post-secondary institutions that could benefit to a considerable degree from a Connecticut affiliation with a regional consortium. Further study of this matter is recommended.

7. A visual inspection of the publication dates of the various trade curriculum guides and numerous complaints registered by trade school instructors and members of this project's advisory committee regarding the need for updating curricula, indicates the need for more frequent revision of each of the trade curricula. Review should occur each year, and if necessary, recommended revisions should be made. This is not to imply that there is a need for extensive revision each year but rather that new materials need to be added, errors corrected and other minor revisions made on an ongoing basis. Specific recommendations addressing ways of accomplishing this are presented under Category 2.

8. Currently, staff hired for curriculum revision during the summer (curriculum steering committee members) are paid on a straight hourly basis, and the amount of that hourly stipend appears inadequate to attract the necessary people to do

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effective curriculum revision. It is recommended that the present hourly rate payment method for curriculum steering committee members be replaced by a standard per diem rate, as is currently done with guidance counselors in the RVTS's system.

9. Curriculum steering committee meetings are frequently limited in terms of meeting time, often meeting only between 12 noon and 2:30 in the afternoon. There have been a number of complaints from steering committee members regarding this structure and its inflexibility. Obviously with meetings of such a short duration it may be difficult to get down to business and maintain the train of thought necessary to do adequate curriculum revision or development work in the given timeframe. For most of the work done by curriculum steering committees, full day meetings would provide a more effective structure to accomplish the goals intended.

10. In order to accomplish timely revision of trade curricula, it will be necessary to change the current process for creating or for conducting revision. Changes required will involve both the revision process in terms of who is involved in that process as well as changes in the physical production, that is the printing and binding of curricula, as well. Recommendations presented under Category 2 will address the various problems that need to be corrected in order to speed up production process and to make it possible to revise curricula as needed on an annual basis.

CATEGORY 2: Current Curriculum Development/Revision Process and Factors Impacting on the Timely Delivery of New or Revised Curriculum Guides

1. Presently, the curriculum development process is both cumbersome and time consuming. This is due in part to the number of steps and the number of groups that are involved in the process of reviewing the curriculum after development/revision by the curriculum steering committees. One particular group whose review function with respect to revisions of currently existing curricula seems unneccessary is that of the program study committee. Based on the results of this study, it is recommended that the program study committee be removed from the process of reviewing curriculum revisions. The program study committee should only be involved in reviewing new curricula.

2. By and large administrators from the various vocational technical schools should also not be involved in the review process for revised curricula except when safety, facilities or legal issues are raised by the changes which are suggested. Such changes should be noted by trade consultants at the state department during their review of the curriculum and referred to school administrators when necessary.

3. A major bottleneck in the current method of producing new or revised curriculum guides is the typesetting/printing process. Vocational technical school print shops have usually been used for the printing of curriculum guides. As with the production work in any vocational education shop, the production objective must necessarily take second priority to the educational process. School print shops, while they do excellent quality work, simply cannot meet a rigid time schedule. Because of this, and to also facilitate the ease of updating curriculum guides, it is recommended that curriculum guides be prepared by electronic means, using the DecMate word processors which are now available in all RVTS's as well as in the central offices in Hartford. The final drafts of all guides should be prepared under

the supervision of the curriculum consultant by the clerical staff of the central office. The guide for each trade area should then be distributed to the RVTS's on floppy disks. The local school would then be responsible for producing the paper copies on their word processor letter quality printers and duplicating and distributing the paper copies to the instructors in their school. Utilization of an electroni production system would also ensure an efficient method for continuous updating of curricula.

4. The previous recommendations presented in Category 2 have targeted several areas to speed up the production process. To this end, the following timetable is proposed with the intent of making curriculum revision a periodic and on-going process. This timetable is presented only for discussion purposes and would have to be adjusted based on a variety of conditions. However, the goal should be the same, and that is to revise curriculum guides as needed and return them to instructors for use at the beginning of each new school year.

Suggested Timetable for Curriculum Revision

Activity	Beginning Date	Ending Date
Review of current curriculum guides by instructors in various trade areas.	September 1	January 31
Craft committees meet and if necessary, make recommendations for needed revisions and submit them to SDE trade consultants.	January 1	February 10
Assistant Directors of the RVTS's collect comments, suggestions from trade instructors regarding revisions. These suggestions are sent to the appropriate trade consultants at SDE.	February 10	February 10
Trade consultants review suggested revisions, make recommendations as necessary and turn materials over to chairpersons of curriculum steering committees.	February 10	March 10

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The curriculum consultant, in consultation with the trade consultants, selects specific curriculum guides to receive extensive revision and updating and lists these in priority order, with the number of areas to be revised being dependent DVTAE funding approval.	March 10	March 15
Curriculum steering committees meet as needed, review suggestions, make modifications and corrections to guide.	March 15	May 15
Curriculum steering committees submit draft of changes to curriculum consultant. Central office clerical staff prepares draft.	May 20	June 10
Curriculum consultant sends copies of revised guides to curriculum steering committee members and trade and Sex Equity consultants for final review.	June 10	June 10
Curriculum steering committee members and trade consultants review final corrections and submit to curriculum consultant.	June 10	June 25
Final edits, preparation and reproduction of floppy disks containing each curriculum guide by central office clerical staff.	June 20	July 25
Floppy disks distributed to each RVTS. Assistant Director at each school is responsible for printing and distributing paper copies of curriculum guide to appropriate trade instructors.	July 25	August 30

*NOTE: Timelines should be adjusted based on the first year trial to correct any inherent problems.

5. The physical structure of current curriculum guides in terms of the style of binding used creates an inflexible document which cannot be added to or deleted from with ease. Curriculum guides should be developed which will be maintained in a loose leaf binder. This binder could include both the curriculum guides as well as attendance records and grade book section if individual instructors so choose. The

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open format of a loose leaf binder would make possible inserting single pages with reinforced edges following the annual revision efforts. One or more pages could be inserted as necessary with updates, revisions or deletions of various parts of the guide. With a change in the printing process as noted in Recommendation 3, the flexibility to insert or delete materials as needed will make for a dramatic time and production cost reduction.

CATEGORY 3: Qualitative Issues Relating to the Structure and Organization of the Curriculum Guide and Student Performance-Based Record-Keeping.

1. The operation of curriculum steering committees and the procedures they must follow to revise old curricula or develop new curricula needs to be more precisely defined. Curriculum steering committees have no specific guidelines with respect to what process they follow, what outside resources to consult, and the structure or form the curriculum guide should follow. In order to standardize curriculum guides and to ensure uniform quality across the various trade areas, a set of guidelines should be developed for curriculum steering committees with respect to these issues. The full-time curriculum consultant should draft these guidelines, in consultation with trade consultants and curriculum steering committee chairpersons.

2. There is a need for curriculum steering committees to look beyond Connecticut when planning and revising curriculum guides. It is recommended that as a part of the guidelines for curriculum steering committees (see Recommendation #1, Category 3), committees be directed to review curriculum guides from at least three other sources such as VTECS and guides from other states. This exposure to other curriculum materials might generate ideas which could result in significant benefit to curriculum preparation. In addition, there might be a substantial

timesaving if the curriculum developed elsewhere are appropriate for adaptation to Connecticut.

3. It is apparent from data reported earlier in this report that the current student performance-based record keeping system is not being used in the way it was originally intended. While the system has many attractive features, reports from instructors indicate it is both cumbersome and time consuming. For this reason it is recommended that the current system be modified such that the record keeping functions would be divided between the student and the instructor. Presently, a few trade areas require students to maintain their own performance log and this is a common practice in many other states as well. As competency-based vocational education programs, the offerings in Connecticut's RVTS's must maintain a performance-based record regarding student achievement. This issue is in need of further study, and an examination of materials from other states/consortia would be assistance in this area. This is an area which should be investigated by the curriculum consultant, trade consultant and trade department heads. This group should redesign and streamline the current system based on their examination of other materials and their own experience with the trade programs.

Conclusions

Connecticut has been a recognized leader in the field of vocational-technical education for several decades. This leadership has been apparent in the high quality of vocational programs offered by the state vocational-technical schools. Connecticut vocational education was competency-based long before the concept became popular. The use of skilled tradepersons as instructors was an innovation that set the standard for many other states. The reliance on these skilled tradepersons and the craft committees for the development and revision of curricula has been a definite plus for

the system and has helped to maintain currency and relevance in program offerings. However, we have entered a period of rapid change both in the types of jobs available and in terms on the job tasks which make up many familiar occupations. This has created a situation in which it is difficult for both educators and craftpersons to remain abreast of their fields. The curriculum development process which had served Connecticut well for many years is in need of updating, with particular emphasis on accomplishing curriculum revision in a timely fashion and the need for Connecticut educators to be aware of what is happening in other similar educational programs and to insure that they know the full range of job tasks which make up the occupations for which our vocational education students are preparing. The State Department of Education must take the lead in reviving the curriculum development process as a viable and high quality endeavor.

While the current curriculum development process appears to produce curriculum guides which outline comprehensive and appropriate student performance objectives for the respective trade areas, the process is cumbersome and creates significant delays in getting curricula through the revision process and into the hands of instructors. Members of curriculum steering committees are typically selected from among the best instructors in particular trade specialities and as such, represent a high level of expertise. However, the current curriculum development process does not demand or even strongly encourage curriculum steering committees to look beyond the bounds of their own expertise for curriculum content or structure.

To insure the highest quality curricula, educators must examine the ideas of others, adapt the most creative ideas to current needs, and build these ideas into their own educational programs and curricula. Curriculum development should be done in a systematic and scholarly manner. The staff of the vocational-technical schools exhibit both the desire and talent to approach curriculum development in this fashion.

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The recommendations presented earlier, if implemented, will serve to enhance and improve curriculum development efforts by addressing the limitations which exist in the current process. Given the dedication and commitment exhibited by vocational-technical school staff, if the suggested changes are implemented, the staff will make the reorganized curriculum development effort a success.

APPENDICES

APPENDIX A

TABLES/SURVEY INSTRUMENTS

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational-Technical Schools
Hartford

January 7, 1985

TO: ASSISTANT DIRECTORS
VOCATIONAL-TECHNICAL SCHOOLS

FROM: DR. FREDERICK HADDAD, CONSULTANT
RESEARCH AND CURRICULUM
DIVISION OF VOCATIONAL TECHNICAL SCHOOLS

SUBJECT: CURRICULUM RESEARCH STUDY

As mentioned in Mr. Tedesco's December 4, memorandum to you, he outlined a curriculum development study which the Division has undertaken to review the status of our current curriculum development process and guides. Part of the data we need for the study must come from you. It is essential that we determine the level and type of use which instructors currently make of the curriculum guides for each of the trade areas which are prepared and distributed by the Division on a periodic basis. You will note on the questionnaire that we need minimal information regarding each instructor, but it is important that we have the information from all trade instructors.

What we ask is that you personally contact each trade instructor and record the information requested on the attached sheet, using a separate sheet for each instructor. We have kept the amount of data requested to a minimum so as to not require an inordinate amount of your time to collect it. We estimate that five minutes with each instructor should be sufficient to get the necessary data. We ask that you have the information sheets completed and returned to me by February 1, 1985.

As the instructional leader in your school, we feel that you are in the best position to collect this data and the data you provide will give us an accurate picture of the use of the curriculum guides. We should emphasize that the purpose for collecting this data is to determine the overall use of curriculum guides. It is not our intent to compare schools or trade areas or to infer judgment about instructors or schools based on whether the guides are used or not. The focus of our study effort is strictly on the quality and utility of the curriculum guides and the process which produces them. With your assistance, we can determine whether our current efforts are meeting the needs of our instructors and if not, what might be done to improve the current process.

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Mail

Message from [3,50] C.O., SIMS Mon, 11-Feb-85, 9:22 AM

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational-Technical Schools
Hartford

February 11, 1985

To: VOCATIONAL-TECHNICAL SCHOOL ASSISTANT DIRECTORS

Henry Abbott
H. H. Ellis
ETG/Southeastern
H. C. Wilcox
Platt
E. C. Goodwin

From: Dr. Frederick L. Haddad

Subject: Curriculum Research Study

If you have not completed the Curriculum Research Trade Instructor Surveys, please try to finish by Monday, February 18, 1985 and forward to me.

Thank you for your assistance.

FLH:ljs

cc: Angelo Tedesco
Kenneth Gray
V-T School Directors

-- Ken Gray
cc: Abbott VT 1983, SIMS Ellis VT 1983, SIMS
Grasso VI 1983, SIMS Platt VT 1983, SIMS
Goodwin VI 1983, SIMS
Action type "H" for help, <Keep>

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TABLE 1

(Survey form with number of YES and NO responses and percent of YES responses)

TRADE CURRICULUM SURVEY

% of Group Resonding YES			
			1. Trade area: _____
			For questions 2 through 6, please circle YES or NO.
95%	YES 248	NO 12	2. Does the instructor have a copy of the curriculum guide in his/her possession and readily available?
			Why not? _____
			If YES, answer questions 3 through 6. If NO, go to question 8.
79%	YES 206	NO 54	3. Does this instructor use the curriculum guide on a weekly basis to plan instruction?
94%	YES 246	NO 14	4. Does the instructor use the instructional objectives presented in the guide to shape the learning activities of students?
73%	YES 190	NO 70	5. Does this instructor use the performance based student record keeping system which is provided in the curriculum guide?
79%	YES 206	NO 54	6. Is the record system up-to-date with appropriate notations regarding the status of each student?
			7. Please check the statement which most accurately describes how this instructor uses (or does not use) the curriculum guide.
2%	5		a. The instructor does not use the guide at all for instructional or planning purposes.
69%	169		b. The instructor use the guide as a general guideline for planning instruction but does not necessarily follow the guide on a daily basis nor address each and every objective.
20%	48		c. The instructor uses the guide on a daily basis, planning lessons which incorporate specific objectives drawn directly from the guide.
9%	22		d. The instructor uses the guide as the primary sources of information for planning each class and follows explicitly those objectives outlined in the guide for implementing instructions.

8. What is the major strength of the curriculum guide for your trade area?_____

_____

9. What is the major weakness of the curriculum guide for your trade area?_____

_____

10. Do you have any suggestions that would improve the curriculum development process or the curriculum guides?_____

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NOTE: There are two sets of numbers for each response option for each question. The figures to the far left are the % responding to that option, while the figures to the immediate left of each response option is the actual number of advisory committee members who selected this response.

A SELF-RATING EVALUATION

In your current course or program:

1. Students are evaluated and placed at a level of instruction appropriate to their present capabilities.

8	1	always
58	7	often
25	3	sometimes
8	1	rarely
0	0	never

2. Students learn at their own pace.

8	1	always
66	8	often
25	3	sometimes
0	0	rarely
0	0	never

3. Students are provided with, and are able to select from, a variety of learning activities and resources.

0	0	always
42	5	often
25	3	sometimes
33	4	rarely
0	0	never

4. Each student learns skills to meet his/her own needs, rather than learning skills that are assigned to the whole class.

8	1	always
8	1	often
50	6	sometimes
33	4	rarely
0	0	never

5. Students learn from each other.

17	2	always
75	9	often
8	1	sometimes
0	0	rarely
0	0	never

6. Students fully understand prior to instruction what is expected of them.

33	4	always
33	4	often
25	3	sometimes
8	1	rarely
0	0	never

7. Students can work independently and without constant teacher supervision.

0	0	always
50	6	often
33	4	sometimes
17	2	rarely
0	0	never

8. Students are allowed to help plan their own learning activities.

0	0	always
17	2	often
33	4	sometimes
42	5	rarely
8	1	never

9. Performance objectives are used to specify student outcomes.

17	3	always
42	5	often
33	4	sometimes
0	0	rarely
0	0	never

10. The course performance objectives are based on a valid job analysis.

17	2	always
50	6	often
33	4	sometimes
0	0	rarely
0	0	never

11. Students know exactly what the minimum level of performance is for an objective or activity.

25	3	always
25	3	often
42	5	sometimes
8	1	rarely
0	0	never

12. Learning materials are easily accessible to students when they need them.

0	0	always
75	9	often
17	2	sometimes
8	1	rarely
0	0	never

13. Personnel such as teacher aides, paraprofessionals, or advanced students are available to help students who experience learning difficulties.

8	1	always
8	1	often
8	1	sometimes
66	8	rarely
8	1	never

14. Available facilities allow for both individual, small-group, and large-group instruction.

8	1	always
17	2	often
42	5	sometimes
25	3	rarely
8	1	never

15. Students are evaluated according to written performance standards and not how other students are doing in the class.

0	0	always
17	2	often
66	8	sometimes
17	2	rarely
0	0	never

16. Instruction is individualized.

8	1	always
42	5	often
42	5	sometimes
8	1	rarely
0	0	never

17. Students have a record of what competencies they have achieved.

25	3	always
33	4	often
25	3	sometimes
17	2	rarely
0	0	never

CURRICULUM GUIDE RATING FORM

YOUR TRADE AREA: _____

INSTRUCTIONS: After reviewing the curriculum guide for your trade area, please respond to each item on the following rating scale based on how your guide meets these criteria. You will note that for each of five categories (Objectives, Methodology, Organization, Evaluation, and Overall), there is a continuum. Each number on the continuum for each of these five items has descriptors which relate to the number. Circle the number which most accurately decribes each item based on the descriptors.

1. OBJECTIVES

---

1 2 3 4 5

Objectives are Vague, unclear or missing. Mixes various types of objectives, confusing.

Average, some of the criteria for objectives met, some missing, at times inconsistent. Only partially operational for the classroom teacher.

The objectives are stated clearly. A consistent conceptual framework. Excellent Useful for a teacher.

2. METHODOLOGY

---

1 2 3 4 5

Very little help is given on methodology, or methodology is too abstract and compex for most students and teachers. Methodology appears to be unrelated to content and an afterthought in the package. Too active or passive for most students. Doesnt have appropriate methodology for variety of learning ability among students.

Gives help to the teacher, but would like more. Some students would be able to cope with the suggested methodology, but others not. Doesn't appear to have been tested methodology.

Uses a variety of modes in the transactions. Does not chain a teacher to a mode without reason, but provides assistance for different abilities. Teachers will find methodology easy to use and believe students will respond.

3. ORGANIZATION OF MATERIALS (scope and sequence)

---

1 2 3 4 5

Sequence illogical or unstated. Does not appear to have subjected material to any analysis to build an instructional design. Scope is uncertain, seems to contradict sequence.

Average in organization. Some help but teacher must supply most of organizational sequence. Scope somewhat limited, may be too narrow (or broad).

Excellent organization of scope and sequence. Conceptually developed on a consistent theory; task analysis or other appropriate investigation has been done.

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4. EVALUATION

1	2	3	4	5
Haphazard in approach. Product and process learning either neglected or confused.		Some examples given range of evaluation limited. Samples given but limited and sketchy.		Many suggestions and helps in evaluation for the teacher. Has reference where appropriate.

5. OVERALL ASSESSMENT

1	2	3	4	5
Poorly designed. Conceptually weak and inconsistent or haphazard design. Does not appear to have accurate assumptions about children who will be using material. Underdeveloped.		Has strengths and weaknesses, but most teachers would find satisfactory. On the balance comes out about average, would need considerable supplementary efforts by teachers. A compromise.		Excellent, one of the best by comparison with other material. Theoretically strong and carefully planned. Show consistent design. Would recommend highly.

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QUESTIONS/ISSUES
REGARDING THE CURRICULUM/CURRICULUM GUIDES

1. Is the guide organized in an effective manner such that it makes it easy to use?

2. Does the curriculum guide provide clear and complete instructions for implementing the curriculum?

3. Can the total curriculum as outlined in the guide be implemented within the practical time, personnel and resource constraints of your shop?

4. Is the guide appropriate to the target population of students?

5. Should the guide be more explicit regarding methods, materials and teaching strategies, or should it be less explicit, or is it about right.

6. Does the activities section of the guide include activities which are logically related to insuring that students achieve the objectives outlined earlier in the guide.

7. Are the curriculum components (activities, objectives and student evaluation) all logically related?

8. Is the content outlined in the curriculum guide adequate to meet the objectives?

9. Does the guide provide objectives and activities which are up-to-date and suitable for instruction in your trade area?

10. To what extent are the objectives and activities complete with regard to what students need to know to become competent skilled tradespersons?

11. Does the curriculum outline learning strategies/activities which are relevant to both the students and the material to be learned?

12. Does the curriculum guide outline a heirarchy of learning activities which is appropriate for each grade level, and that leads logically to the next grade level?

13. Can teachers with different training/backgrounds implement the curriculum equally well?

14. Can a teacher without special training in the content implement the curriculum?

15. Does the guide provide sufficient learning activities for the complete course of study?

16. Is the current performance based student record keeping system which is incorporated in the guide:
    a. an accurate reflection of the skills students need to perform on the job.
    b. too time consuming/about right/not extensive enough
    c. are the individual student objectives truly "objective" and measureable such that you can make an accurate performance appraisal of the student.
    d. how could student evaluation be improved. Please explain.

17. What types of training, support, and resource personnel are necessary to implement the curriculum? Please Explain.

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APPENDIX B

MEETING AGENDAS AND SUMMARIES

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational-Technical Schools
Hartford

December 6, 1984

CURRICULUM RESEARCH ADVISORY COMMITTEE MEETING AGENDA

December 17, 1984 11:30 A.M. Steak Club, Vernon, CT

I. Welcome and Greetings - Angelo Tedesco, Associate Commissioner
Kenneth Gray, Assistant Division Director
Division of Vocational-Technical Schools

II. Introductions and Review of Project Background and Purpose - Frederick Haddad, Consultant

III. Project Overview and Description of Project Goals, Objectives and Activities - Donald Thompson, University of Connecticut

IV. The Role of the Advisory Committee - Donald Thompson

V. Timetable for Project Activities

VI. Solicitation of Advisory Committee Members Observations and Recommendations for Project Activities and Process

VII. Setting of Time and Dates for Future Committee Meetings

VIII. Adjourn Approximately 2:30 p.m.

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Dr. Donald L. Thompson
EDUCATIONAL CONSULTANT
135 HUNTING LODGE ROAD
STORRS, CONNECTICUT 06268

TELEPHONE 203-429-6277

MEMO

December 19, 1984

To: Advisory Committee Members, Regional Vocational Technical School Curriculum Study

From: Don Thompson, Project Director

Subject: Summary of Dec. 17 advisory committee meeting

As I noted in the meeting, I planned to follow-up that meeting with a summary of our activities. First, I would like to thank each of you for your attendence (getting a 100% turnout of such a large group was marvelous) and for your dedication and interest in the project. I shall attempt to summarize point by point some of the essentials of the meeting agenda.

1. The first focus of discussion was project purpose, goals and objectives. Clearly, from the discussion which surrounded this topic, I believe we are all in agreement and have a clear understanding of the issues and concerns. We should not approach the task with any preconceived ideas with respect to what should or should not change. Essentially, to restate our purpose, we simply want to examine the curriculum development process as it currently exists, study methods used by other states/groups, collect some evaluative data on our current process, then make a determination if there is a need for change.

2. Our discussion of the role of the advisory committee was very productive. Your individual role as Advisory Committee members is essential to the success of this project. It is you who have firsthand knowledge of the system and can provide a guiding hand to keep me on the right track. We must keep in mind the purpose of both the study and the advisory committee. Both the study and the committee are advisory in the sense that we are not a policy making group. Policy making and implementation are left to the administrators of the VT schools. I do believe that a strong, comprehensive study with well reasoned recommendations will be taken seriously by the central administration and provide the basis for change if necessary.

3. I have included a copy of the survey I administered at the meeting with a summary of the results indicated on the survey. The items on the questionnaire address the standard issues pertaining to Competency Based Vocational Education which is the model on which the RVTS's base their shop curricula. As you will note, the results seem to indicate that based on your collective perceptions, the current system is generally a competency based model, however ther are some areas of deficiencies as you will note from the responses to the questionnaire (items 4, 8, 13, 15, 17).

4. Dr. Pichanick indicated that she would contact the national director of the V-TEC's consortium project to see if he could attend our next meeting in February, 1985. I shall advise you in a later correspondence regarding the status of this.

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5. We decided the next meeting would be in Hartford (probably at the Hartford Graduate Center) on February 26, 1985. The time and place (with a map) will be sent to you later.

6. I indicated that I would be sending materials for your review in the near future. You can expect to receive the V-TEC's modules and other curriculum materials for review shortly after the new year.

7. I failed to mention at the meeting that we can cover the travel mileage cost for those of you who were not provided with a state car for transportation. If you wish reimbursement for your mileage expenses (I believe the current rate is .20 per mile), please send me a mileage summary sheet with your name and address, the town where your travel originated, your destination (Vernon) and the number of miles (round-trip) you traveled to attend the meeting.

8. If you have any questions or concerns, please don't hesitate to contact me. My address is indicated at the top of the memo along with my home phone number. My office telephone number is listed below.

(O) 486-4814

AGENDA

Advisory Committee
Regional Vocational-Technical School Curriculum Study Project

Second Meeting

February 25, 1983 9:30 a.m. Hartford Graduate Center, Room SG1

Project Director: Dr. Donald L. Thompson, The University of Connecticut

1. Welcome - Drs. Thompson and Haddad
2. Greetings, Dr. Kenneth Gray, Superintendent, Vocational-Technical Schools
3. Dr. Valerie Pichanick-Introduction of Guest Speaker, Dr. Ron McCage, Director, V-TECS
4. Overview of V-TECS and the Consortium, Response to Committee Members Questions- Dr. McCage
5. Lunch
6. Committee Review of V-TECS Modules, Comments and Discussion
7. Review of current curriculum development processes and procedures - Dr. Fred Haddad.
8. Review of Results of Assistant Directors Survey of Trade Instructors Regarding Use of Curriculum Guides
9. Review of Proposed Form for Random Survey of Trade Instructors Regarding Use of Curriculum Development Process, Student Evaluation and Value of Curriculum Guides
10. Review of Upcoming Project Activities
11. Setting of Time and Date for Next Committee Meeting
12. Adjourn Approximately 2:30 p.m.

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MEMO

March 19, 1984

To: Advisory Committee Members, Regional Vocational Technical School Curriculum Study

From: Don Thompson, Project Director

Subject: Summary of February 26 advisory committee meeting

Members in attendance: Gabe Malafronte, John Farrell, Marsha McDonough, Leo Lattizori, Thomas Thill, Lewis Randall, George Paradis, Andrew Jakab, Barbara Biscardi, Paul Higginson, John Krupczak. Others in attendance included: Ken Gray, Fred Haddad, Joan Briggaman, Valerie Pichanick, Ron McCage, Chris Olson and Donald Thompson.

As I noted in the meeting, I planned to follow-up that meeting with a summary of our activities. First, I would like to thank each of you for your attendance and for your continued commitment and interest in the project. I shall attempt to summarize point by point some of the essentials of the meeting agenda. In some cases, I have had to draw conclusions regarding the consensus of opinion in the group. If you feel I have inaccurately portrayed the consensus, please let me know.

1. The meeting was opened by Dr. Haddad who introduced Dr. Ken Gray, Superintendent of Vocational Technical Schools. Dr. Gray's remarks high-lighted the importance of our mission. One of the key points made by Dr. Gray was the need to examine making the curriculum guide and the student record-keeping system separate documents. My interpretation of his remarks indicate he felt the current system was somewhat cumbersome.

2. Dr. Valerie Pichanick who had served as the contact person to assist in arranging for the visit and demonstration by Drs. McCage and Olson, introduced the speakers and turned the meeting over to Dr. McCage.

3. Dr. McCage provided a comprehensive overview of VTECS, using a videotape and supplying us with a packet of materials outlining VTECS curriculum materials and the consortium. Below I have summarized some of the key points he made during his presentation.
   - VTECS currently has 15 member states, with the central offices being located in Atlanta, Ga.
   - VTECS products include 1. Catalogs of performance objectives and performance guides, 2. Curriculum guides (currently only three areas are listed in the products list, however, Dr. McCage indicated that 12 guides are available, with about that many more to be completed this year), 3. VTECS criterion referenced test items. We have ordered several VTECS Guides and hope to have them available for inspection at the next meeting of the advisory committee.
   - VTECS services in addition to the materials include: 1. ODAS or Occupational Data Analysis System (the Michigan product demonstrated by Dr. Olson) and 2. Customized in-service programs, seminars and workshops.

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- the VTECS mission is seen primarily as providing coordination in the design of comprehensive systems for the development of competency-based vocational technical curriculum and program materials.
- there are two categories of membership in VTECS depending on the size of the state. Connecticut apparently falls in Category II which means the direct cost of membership would be $40,000 to $60,000 per year. In addition we would be required to produce one product (guide, catalog, or other acceptable product) per year. The cost of producing the product would also accrue to the state.
- the major strength of VTECS seems to be in the consortium concept, in that the association and interaction with other member states provide for professional growth, quality product development and the opportunity to share the products developed by others states.

5. After a lunch break, the meeting resumed with a discussion of the issues raised in the morning session, and a review of the VTECS catalogs which members have had for the last month. I will summarize the central themes from that discussion below.
   - the consensus of the committee seemed to be that while the VTECS consortium offers some distinct advantages for a state such as Connecticut in terms of the ODAS system, the opportunity to learn from other states, and the resource materials, VTECS affiliation would not solve any immediate curriculum concerns in terms of providing a curriculum guide which could be taken directly to each of the trade areas. We would still have to "develop" most if not all of our own curriculum guides.
   - there is a wide variation in quality among the VTECS catalogs reviewed by committee members. Some seem excellent and up-to-date, while others are dated and sketchy.
   - the one Curriculum Guide (Secretarial) which Dr. McCage brought for inspection appeared to be very comprehensive and quite well done.
   - currently a limited number of Guides exist (only three are listed in the latest VTECS newsletter). These represent the product which an instructor can take directly into the shop and teach from. The catalogs provide only a design for outlining the curriculum.
   - the consensus of the committee was that while VTECS might be worth further exploration for the purpose of investigating the benefits of consortium membership other than just the immediate return in terms of curriculum materials (i.e. the databases, the sharing and association with other states working in this area, etc.), it would not provide a great deal of immediate assistance in terms of our current curriculum needs.

5. Dr. Haddad reviewed the current curriculum development process as outlined in the previously distributed four page document. His observations and the key comments of committee members are summarized below.
   - the current process is one which was developed many years ago by Fred Okula and has since been adopted in several other states.
   - a major concern about the current process is the time lag from the point the curriculum revision is begun to the point that the curriculum guide actually reaches the trade instructor. It may take as long as three years.
   - Dr. Haddad has already begun to streamline the process (i.e. through elimination of the Program Review committee involvement).
   - there are obvious variations in quality among the various guides.
   - there is a need for more continuity among those instructors who now serve on the curriculum committees. Whenever possible, there should be

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membership carryover to each new committee to insure that each committee has someone who is experienced in the process.

- some keys issues to be addressed include; Who should review the curriculum after it has been developed?; What procedural steps should be built into the process to insure standardization among the various committees in the curriculum development process?; Are there ways of printing/duplicating the curriculum guides which would speed up their delivery?; What other factors might we change in the current process that would both speed up the process and at the same time insure that the curriculum guides produced are of the highest quality? (If you have any particular suggestions regarding these matters, please jot them down on paper and send them to me).

6. The next item of business was a review of the survey conducted last month with the assistance of the Assistant Directors. The computation of the final frequencies and percentages for questions 2 through 7 is not complete yet since surveys were still arriving as this was being written. I have completed summarizing the responses to the open-ended questions 8, 9 and 10. A summary of the responses to these items is presented below.

In analyzing questions 8, 9, and 10, I tried to see what major themes ran through overall responses and then categorize the responses into one of the broad themes.

For question 8, 238 instructors responded to "What is the major strength of the curriculum guide for your trade area?". There were five theme areas that emerged. The theme response that was dominant was "It aids in developing lesson plans".Forty-six percent of the instructors gave a response falling in this category.The next most prevalent response was, "it serves as a good general guide for teaching", with 29% of the instructors giving this response. Fourteen percent said it "Provided a good method for student record-keeping" while 6% responded that it "Serves as a good reference" and another 5% said "It is current".

On question 9, 178 instructors answered the question, "What is the major weakness of the curriculum guide for your trade area?". Responses were similarly grouped into broad theme areas, with four themes represented. The most frequently noted weakness was, "It's outdated" with 48% of the instructors giving this response. Twenty-five percent of the instructors said, "It includes too much material to cover in the amount of time available". Another 20% indicated that the guide, "Requires to much equipment that is not available, while 7% said that "Some parts of the guide are irrelevant".

Question 10 asked, "Do you have any suggestions that would improve the curriculum development process or the curriculum guide?". Eighty-five instructors said, "Update it". This response was the only broad, consistent theme. There were a number of other individual responses which are summarized by trade area below.

- Welding- need more equipment
- Machine tool- focus on better transparencies; get more input from all instructors; individualize guides to serve specific geographic areas.
- Electronics- show time schedules; omit excess subject matter; eliminate duplicate record-keeping; make guide objectives less vague; provide for better time planning.
- Carpentry- make guide more specific; provide for better student record-keeping; more focus on hand tool work.
- HSO- make guide more practical and less theoretical; put in less detail.
- Auto mechanics- get more input from instructors; add sections on electronics; keep the pink guide (?); provide more shop time.

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- Electrical- improve the entrance test; provide for different ability levels of students in the guide.
- Graphics communications- should reflect the needs of local industry.
- Plumbing- should include information on problem-solving; throw the darn thing away!
- Air conditioning and refrigeration- make topic outline more explicit; should reflect local industry needs.
- Culinary arts- provide more room for comments (?).

7. A list of questions was distributed to all members. These questions might be some we could use in a possible future random survey of trade instructors should additional data be needed. Committee members were asked to review this list and determine if additional questions might be needed and/or if any of the questions on the list were not needed. Several committee members have already returned the lists to me with comments. However, I had not planned to use them just yet and if you haven't sent them along, please hold on to them until the next meeting. Focus your attention on two major considerations. First, we want to establish if the curriculum development process is effective, and expeditious, and second, are the curriculum guides considered to be of high quality. Do the questions on my list adequately cover those two major issues?

8. The major item of business for me, and to some extent for you as committee members will be the review of some additional curriculum materials. I have requested copies of the resource catalog from MAVCC or the Mid America Vocational Curriculum Consortium. They produce curriculum guides and other advanced curriculum materials and their operation is similar to VTECS. We shall see if their materials as as good or better. Those materials may or may not be here prior to the next meeting.

9. We decided the next meeting would be held on Tuesday, April 9, 1985. The time and place (with a map) will be sent to you later. As a part of that meeting, we will have a consultant with us to describe the DACUM process. Ms. Audney Miller Beach who only recently left the National Center for Vocational Technical Education at Ohio State is the consultant. She is now employed as Director of Staff Development at Maine National Bank. She worked with Bob Norton in developing DACUM. I thing the presentation will give us an interesting contrast to the VTECS approach.

If you have any questions or concerns, please don't hesitate to contact me. My address is indicated at the top of the memo along with my home phone number. My office telephone number is listed below.

(O) 486-4814

Respectfully submitted,

Don Thompson
Project Director

P.S. I have enclosed a copy of the Open Entries newsletter. This newsletter is supported in large part by funding from VTECS. VTECS uses this newsletter as a forum for discussions, advertising of products, etc. I think you will find it interesting. An earlier issue of the newsletter was included in the packet that Dr. McCage distributed at the meeting.

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AGENDA

Advisory Committee
Regional Vocational-Technical School Curriculum Study Project

Third Meeting

April 9, 1985 9:00 a.m. Hartford Graduate Center, Room G9

Project Director: Dr. Donald L. Thompson, The University of Connecticut

1. Welcome and Greetings - Drs. Thompson and Haddad
2. Committee Review of V-TECS Guides (if available) and Other Curriculum Materials (MAVCC, etc.), Comments and Discussion
3. Final Review of Both Quantitative and Qualitative Data From the Assistant Directors Survey of Trade Instructors Regarding Use of Curriculum Guides
4. Review of Members Reactions to the Question List Distributed at the Last Meeting - 17 Questions Regarding the Curriculum Development Process, Student Evaluation, and Value of Curriculum Guides
5. Discussion of Current Curriculum Development Process, Development of Possible Alternatives and Drafting of a Flowchart of Activities and Timelines - Dr. Haddad
6. Discussion of Alternative Means of Producing (Printing) Curriculum Guides to Speed Up the Process, Specificaslly the Possibility of Electronic (Computer) Production, Storage and Distribution - Dr. Thompson
7. Dr. Donald L. Thompson - Introduction of Guest Speaker, Ms. Audney Miller-Beach, DACUM Consultant.
8. Overview of the DACUM Process, Response to Committee Members Questions-Ms. Miller-Beach
9. Review of Upcoming Project Activities - Dr. Thompson
10. Setting of Time and Date for Next Committee Meeting
11. Adjourn Approximately 1:30 p.m.

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Dr. Donald L. Thompson
EDUCATIONAL CONSULTANT
135 HUNTING LODGE ROAD
STORRS, CONNECTICUT 06268

TELEPHONE 203-429-6277

MEMO

May 6, 1985

To: Advisory Committee Members, Regional Vocational Technical School Curriculum Study

From: Don Thompson, Project Director

Subject: May 28, 1985 Meeting of the Committee

As we established at our last meeting, the fourth committee meeting is to be held on May 28, 1985, 9:00 a.m. Since the location of the last meeting seemed satisfactory to everyone, we have decided to return to the Hartford Graduate Center, Room 206. I will mail the agenda in mid May. Please put the date on your calendar and attend the meeting if at all possible. If you have any questions or concerns in the interim, please call me. We will be serving coffee and danish (from the cafeteria) at the meeting. You will recall from the last meeting that there are lunch facilities in the building including a small cafeteria.

This mailing includes the summary of the April 9 meeting. Please try to review it prior to the next meeting since we will be discussing some of the same issues and trying to get some solutions to the current curriculum development problems.

I believe we will have another productive meeting on May 28 and I hope to see you there.

Thank you for your time and continuing interest in the project.

PLEASE NOTE: IF YOU HAVE ANY VTECS OR OTHER CURRICULUM MATERIALS WHICH I HAVE LOANED YOU, PLEASE RETURN IT ON MAY 28. THANKS

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MEMO

May 5, 1985

To: Advisory Committee Members, Regional Vocational Technical School Curriculum Study

From: Don Thompson, Project Director

Subject: Summary of April 9, 1985 advisory committee meeting

Members in attendance: Gabe Malafronte, John Farrell, Marsha McDonough, Thomas Thill, George Paradis, Barbara Biscardi, John Krupczak, Daniel Varano, and William Henaghan. Others in attendance included: Fred Haddad, Valerie Pichanick and Joe Fitzgerald (Ct. State Dept. of Education), Brenda Kallback (Ct. Board of Governors of Higher Education) and Donald Thompson, Project Director.

As I noted during the April 9 meeting, I planned to follow-up that meeting with a summary of our activities. First, I would like to thank each of you for your attendance and for your continued commitment and interest in the project. I shall attempt to summarize point by point some of the essentials of the meeting agenda. I have had to draw conclusions regarding the consensus of opinion in the group regarding some of the issues which were discussed. If you feel I have inaccurately stated the consensus, please let me know.

1. The meeting was opened by Dr. Haddad who greeted committee members and reviewed the project activities to date.

2. Dr. Thompson reviewed some additional background information regarding V-TECS Guides and other curriculum materials (MAVCC, etc.). Dr. Thompson noted a correction to the previous summary of the second meeting regrading the cost of V-TECS membership. The correct figure is $20,000,00 plus product development costs. Members provided comments and discussion of issues relating to V-TECS membership. With the conclusion being that V-TECS membership could provide Connecticut with some planning assistance and other benefits of consortia membership but that the present curriculum materials would not necessarily provide any immediate solutions for replacing the currently used curriculum guides in VT schools.

3. Dr. Thompson provided a review of the final tallies for both the quantitative and qualitative data from the Assistant Directors survey of trade instructors regarding use of curriculum guides. He noted that the percentage figures that were reported earlier regarding the responses to the first seven items had not changed appreciably after data from the last three schools were included. The qualitative responses (write-in) for questions 8 to 10 of the survey were reported in the memo sent to committee members prior to the April 9 meeting. It was decided that Dr. Thompson would construct summaries by trade area for these questions and distribute them to committee members, Curriculum Steering Committees and other interested parties.

4. Dr. Thompson introduced the guest speaker, Dr. Audrey Miller-Beach, who is a consultant for the National Center for Research in Vocational Education on the DACUM Curriculum project.

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5. Dr. Miller-Beach provided the committee with an overview of the DACUM process, and responded to committee members questions. The DACUM model is a process model, using skilled tradespersons to actually develop curricula. A trained DACUM facilitator leads the group of experts through the process of doing a task analysis of the occupation and identifying appropriate instructional objectives for vocational education programs.

6. Following a short lunch break, the meeting resumed with a discussion of the 17 questions drafted by Dr. Thompson (distributed at the second meeting) regarding the current curriculum development process and the quality of curriculum guides and the student evaluation system. What follows is a description of the discussion and consensus of the committee regarding these questions.

1. Is the guide organized in an effective manner such that it makes it easy to use?
   Yes. However, attendance, grades and the curriculum should be contained in one document. The current competency based record keeping system is a problem however and many instructors do not maintain it as intended. It is too time consuming.

2. Does the curriculum guide provide clear and complete instructions for implementing the curriculum?
   No instructions are provided in the guides as to how to implement the curriculum. The guides were not intended to be a complete curriculum in this respect. The consensus of the group is that the guides should not necessarily be "complete" in the sense of containing everything one needs to know to implement the curriculum. However, Department Heads Assistant Directors should be responsible for assisting new instructors to implement the curriculum. This should also be covered in the orientation provided for new instructors. New teachers should have a complete job description, and a set of instructions on how to handle the classroom, curriculum and academic procedures.

3. Can the total curriculum as outlined in the guide be implemented within the practical time, personnel and resource constraints of your shop?
   The committee was split in its opinion regarding this question. There was variability based on both trade area and school. It is possible to expose students to all of the objectives for most trade areas, however it is not possible to insure that all students have achieved all competencies. Partly, this results from an increase in class size in most shops (from 12 to the now mandated 20) and the dramatic decline in the dropout rate which means larger class size at the higher grade levels.

4. Is the guide appropriate to the target population of students?
   Yes. In most respect, the guide does provide meaningful objectives relative to the needs of an entry level tradesperson.

5. Should the guide be more explicit regarding methods, materials and teaching strategies, or should it be less explicit, or is it about right?
   Most guides as they are currently written are appropriate for the experienced instructor. However, the degree of explicitness is not adequate or the new instructor who has no knowledge of how to implement the curriculum. The guides do not provide this type of instruction. Because of variations within trade area in different parts of

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the state, most committee members expressed concern over making the guides too explicit and taking away the individual instructors ability to make creative adjustments to the curriculum. Besides, the textbooks used in each trade area provide a fairly explicit guide for instruction in each shop.

6. Does the activities section of the guide include activities which are logically related to insuring that students achieve the objectives outlined earlier in the guide.

   The current curriculum guides do not generally specify activities designed to accomplish each objective. Two exceptions were noted, HSO and Electronics. Comittee members noted the guides were not intended to indicate activities.

7. Are the curriculum components (activities, objectives and student evaluation) all logically related?

   The general agreement of the committee indicates that the answer to this question is YES with respect to the objectives and student evaluation.

8. Is the content outlined in the curriculum guide adequate to meet the objectives?

   In terms of the curriculum objectives for each area, the answer to this question is YES, curriculum guides are generally very comprehensive in terms of the objectives stated. However, guides generally list only objectives as noted in the answer to question 7.

9. Does the guide provide objectives and activities which are up-to-date and suitable for instruction in your trade area?

   This is definitely a problem area for many of the guides which are out-of-date and in need of updating.

10. To what extent are the objectives and activities complete with regard to what students need to know to become competent entry level tradespersons?

    The guides generally provide adequate material/objectives to prepare graduates to enter the trade at the pre-apprentice level.

11. Does the curriculum guide outline learning strategies/activities which are relevant to both the students and the material to be learned?

    As such, the guides do not provide learning strategies or activities. However, the objectives which are provided are in fact relevant to both students and the material to be learned.

12. Does the curriculum guide outline a heirarchy of learning activities which is appropriate for each grade level, and that leads logically to the next grade level?

    This was perceived to be a problem area in several trades. Objectives do not always seem to follow a logical hierarchy up through the grade levels. Many instructors find it necessary to adjust the level for which some objectives are taught. Another problem here is the lack of articulation between some academic areas and the needs of the trade areas (i.e. insuring that certain math concepts are taught in the academic classrooms so that particular trade areas may move ahead in teaching fundamental concepts related to the trade area).

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13. Can teachers with different training/backgrounds implement the curriculum equally well?
    YES, but also see response to question 14.
14. Can a teacher without special training in the content implement the curriculum?
    NO. The nature of the trade programs in Connecticut VT Schools is such that only competent and highly skilled tradespeople can do the job.

15. Does the guide provide sufficient learning activities for the complete course of study?
    For the most part guides do not provide specific learning activities as noted in several sections earlier.

16. Is the current performance based student record keeping system which is incorporated in the guide:
    a. an accurate reflection of the skills students need to perform on the job?
       In general YES. However, many instructors do not use this system for a variety of reasons.

    b. too time consuming/about right/not extensive enough?
       The process as it currently exists is in fact too time consuming given the other demands placed on the trade instructors. This is a major reason why is it not used by many instructors.

    c. are the individual student objectives truly "objective" and measureable such that you can make an accurate performance appraisal of the student?
       YES. A skilled tradesperson can determine the degree to which each student has achieved most objectives.

    d. how could student evaluation be improved? Please explain.
       This will be a major topic for discussion at the next meeting.

17. What types of training, support, and resource personnel are necessary to implement the curriculum? Please Explain.
    Additional training for new instructors is badly needed. Special education support in terms of remedial math and reading is especially important in terms of supporting the on-going instruction efforts in both the shops and the academic classrooms. This support is an absolute requirment to insure that the special needs students can keep pace with the trade instruction.

7. Dr. Thompson provided a review of upcoming project activities, including the need to begin identifying some specific solutions to improving the timeliness and quality of curriculum guides, by drafting a flowchart of curriculum development activities, setting timelines, considering alternative means of printing the guides, etc. It was decided that these items would constitute the bulk of the agenda for the upcoming meeting.

8. The time and date for next committee meeting was set for 9:00 a.m., May 28, 1985 at the Hartford Graduate Center.

9. The meeting was adjourned at approximately 2:45 p.m.

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AGENDA

Advisory Committee
Regional Vocational-Technical School Curriculum Study Project

Fourth Meeting

May 28, 1985 9:00 a.m. Hartford Graduate Center, Room 206

Project Director: Dr. Donald L. Thompson, The University of Connecticut

1. Welcome and Greetings - Drs. Thompson and Haddad

2. Committee Review of Curriculum Materials (MAVCC, V-TECS, CIMC, etc.), Comments and Discussion

3. Discussion of Current Curriculum Development Process, Development of Possible Alternatives and Drafting of a Flowchart of Activities and Timelines - Dr. Haddad

4. Review of Current Structure and Content of Curriculum Guides, Student Record-Keeping/Student Evaluation and Discussion of Recommendations for Needed Changes to Improve Guides, etc. Review of Needed Resources to Provide Curriculum Planners, Developers With Up-To-Date Materials to Revise Guides (i.e. V-TECS Consortium Membership, MAVCC Materials, etc.)

5. Discussion of Alternative Means of Producing (Printing) Curriculum Guides to Speed Up the Process, Specifically the Possibility of Electronic (Computer) Production, Storage and Distribution - Dr. Thompson

6. Distribution of Qualitative Responses From Instructor's Survey, Summarized By Trade Area. Discussion.

7. Review of Upcoming Project Activities - Dr. Thompson

8. Setting of Time and Date for Next Committee Meeting (if necessary).

9. Adjourn Approximately 2:30 p.m.

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If you have any questions or concerns, please don't hesitate to contact me. My address is indicated at the top of the other memo which is enclosed along with my home phone number. My office telephone number is listed below.

(O) 486-4814

Respectfully submitted,

Don Thompson
Project Director

MEMO

June 17, 1985

To: Advisory Committee Members, Regional Vocational Technical School Curriculum Study

From: Don Thompson, Project Director

Subject: Summary of May 28, 1985 advisory committee meeting

Members in attendance: Gabe Malafronte, Marsha McDonough, Paul Higgenson, George Paradis, Barbara Biscardi, John Krupczak, Bill Henaghan, Daniel Varano, Leo Lattizori, Andy Jakab, Fred Haddad, Valerie Pichanick and Donald Thompson, Project Director.

This memo provides a summary of the committee activities at the May 28, 1985 meeting. The draft recommandations sent earlier constitute the primary content discussed in that meeting and will not be recounted herein. This memo covers only the procedural aspects of our deliberations. First, I would like to thank each of you for your attendance and for your continued commitment and interest in the project.

1. The meeting was opened by Drs. Thompson and Haddad who greeted committee members and reviewed the project activities to date.

2. Dr. Thompson reviewed some additional background information regarding the V-TECS Consortium and other such consortia (MAVCC, etc.). Consistent with earlier discussion, the committee concluded the V-TECS or other consortium membership could provide Connecticut with some planning assistance and other benefits of consortia membership but that the present curriculum materials would not necessarily provide any immediate solutions for replacing the currently used curriculum guides in VT schools.

3. Dr. Haddad described the current curriculum development process and a discussion followed. Further discussion focused on the development of possible alternatives and drafting a set of recommendations to improve the process of developing curriculum guides and improving the content of the guides.

4. Additional areas addressed in a discussion led by Dr. Thompson dealt with issues related to student record-keeping/student evaluation, a review of needed resources for curriculum developers to revise guides and a discussion of alternative means of printing curriculum guides to speed up the process, specifically electronic (computer) production, storage and distribution. The group discussed and developed several recommendations for these areas.

5. Dr. Thompson noted that the qualitative responses from the Instructor's Survey would be distributed at the June 14, meeting. He Summarized the general trends indicated in those responses.

6. Dr. Thompson reviewed upcoming project activities, focusing on the June 14th meeting. He indicated that he would develop a set of draft recommendations and timelines based on committee input, the Instructor's Survey and interviews and would mail those recommendations to committee members prior to the June 14th

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meeting. The June 14th meeting will have the single objective of reviewing and revising the recommendations for inclusion in the project final report.

7. The time and date for next committee meeting was set for 10:00 a.m., June 14, 1985 at the Hartford Graduate Center.

8. The meeting was adjourned at approximately 1:45 p.m.

If you have any questions or concerns, please don't hesitate to contact me. My address is indicated at the top of this memo. My office telephone number is listed below.

(O) 486-4814

Respectfully submitted,

Don Thompson
Project Director

Dr. Donald L. Thompson
EDUCATIONAL CONSULTANT
135 HUNTING LODGE ROAD
STORRS, CONNECTICUT 06268

TELEPHONE 203-429-6277

MEMO

June 6, 1985

To: Advisory Committee Members, Regional Vocational Technical School Curriculum Study

From: Don Thompson, Project Director

Subject: June 14, 1985 Meeting of the Committee

As we established at our last meeting, the fifth committee meeting is to be held on June 14, 1985, 10:00 a.m. Since the location of the last meeting seemed satisfactory we will again meet at the Hartford Graduate Center, Room 206. The agenda for the meeting will consist entirely of reviewing and critiquing the enclosed recommendations. Please put the date on your calendar and attend the meeting if at all possible. If you have any questions or concerns in the interim, please call me. We will be serving coffee and danish (from the cafeteria at the meeting. You will recall from the last meeting that there are lunch facilities in the building including a small cafeteria. We hope the meeting will be a short one and perhaps we can conclude before 1:00 p.m.

Please try to review the recommendations enclosed prior to the meeting.

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APPENDIX C

ADVISORY COMMITTEE NAMES AND AFFILIATIONS

STATE OF CONNECTICUT

DEPARTMENT OF EDUCATION

December 3, 1984

Dear :

Thank you for accepting our invitation to serve as a member of the Curriculum Research Study Advisory Committee.

This study of our curricula, both the process and the product, will be very important to the Division Office in our planning activities for the late 1980's. Dr. Frederick Haddad from Central Office will coordinate this research project.

The first meeting of this committee will be held on Monday, December 17, 1984 at 11:30 a.m. at the Steak Club in Vernon, Connecticut. (Route #84 - Take exit #95 - Turn right at end of exit).

Attached is an abstract of the research study, agenda for the meeting, and a listing of the advisory committee.

Thank you again for your willingness to assist the Division of Vocational-Technical Schools.

Sincerely,

Angelo J. Tedesco
Associate Commissioner

AJT:FHb

cc: Kenneth Gray
Frederick Haddad

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CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational-Technical Schools
Hartford

December 4, 1984

TO: VOCATIONAL-TECHNICAL SCHOOL ADMINISTRATORS
CENTRAL OFFICE CONSULTANTS

FROM: ANGELO J. TEDESCO,
ASSOCIATE COMMISSIONER
DIVISION OF VOCATIONAL-TECHNICAL SCHOOLS

SUBJECT: CURRICULUM RESEARCH STUDY

As I am sure you are aware, Connecticut has been noted for its excellence in state supported vocational education for many years. Our system of Regional Vocational-Technical Schools has a national reputation for quality programs, outstanding faculty, and on-going innovation in our educational efforts. The Connecticut Vocational-Technical School System has been, and will continue to be, a vital part of public education in Connecticut. Connecticut and the country as a whole is now involved in a period of rapid technological advancement, an expanding economy and dramatic shifts in labor supply and demand. To properly address these circumstances, and to keep pace with the many other changes going on about us, we must insure that our vocational programs and the curriculum upon which they are based are the best we can possibly provide. Over the last fifteen years we have had a curriculum development process in place which has served us well in maintaining the relevance of our programs and has contributed to our excellence. I believe that it is time to examine our curriculum development process and products to determine if there are gaps in the current system and if there are ways in which we might improve the process to insure that our curriculum reflects the realities of the world of work, provides the best ways of delivering the educational content of our programs to students, and provides us with adequate means of evaluating the progress of our students.

Through the efforts of Dr. Frederick Haddad, we received a research grant to conduct a study of our curriculum development process. We have contracted with Dr. Donald Thompson of the University of Connecticut, Department of Higher, Technical and Adult Education, to direct the study this school year. Dr. Thompson has worked with our Division and others in the State Department on a number of occasions. His most recent work with our Division was a study of the Health Services Occupations curriculum two years ago. Dr. Haddad will coordinate all aspects of the study and will serve as a liaison between Dr. Thompson and each of the VT schools. An advisory committee, with membership from the Division Office, Administrators and school trade instructional staff has been formulated. I have enclosed a copy of the project abstract to provide you with more information regarding the nature and intent of the study. I ask your cooperation in the conduct of this study. I'm sure that, with your help, the study will be successful and of benefit to your school and students.

AJT:sb
(0500Y)

cc: Kenneth Gray
Frederick Haddad

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CURRICULUM RESEARCH ADVISORY COMMITTEE

1984-1985

COMMITTEE MEMBERSHIP

Trade and Industrial Instructors

	Name	Trade	School
1)	Paul Higginson	Carpentry	W. F. Kaynor RVTS
2)	George Paradis	Electrical	H. C. Wilcox RVTS
3)	Gabriel Malafronte	Plumbing & Heating	Platt RVTS
4)	Mario DiLorenzo	Machine Tool	H. Abbott RVTS
5)	Leo Lattizori	Machine Drafting	E. C. Goodwin RVTS
6)	John Krupczak	Electronics	Grasso/Southeastern RVTS
7)	William Henaghan	Automotive Mechanics	Emmett O'Brien RVTS
8)	Daniel Varano	Food Trades	Eli Whitney RVTS
9)	Barbara Biscardi	Hairdressing & Cosmet.	H.C. Wilcox RVTS

Trade and Industrial Consultants

	Name	Trade Areas
1)	John Farrell	Building Trades
2)	Thomas Thill	Machine Trades

DVTS Administrators

1)	Andrew Jakab	Director	H. C. Wilcox RVTS
2)	Lewis Randall	Director	A. I. Prince RVTS
3)	Marsha McDonough	Assistant Director	Vinal RVTS
4)	Joseph Pernaselli	Assistant Director	Windham RVTS

DVTS Project Coordinator - Frederick Haddad

DVAE Project Administrator - Valerie Pichanick

Project Director - Donald Thompson

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